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A Framework for Recreational Therapy Interventions in the Treatment of Post-Traumatic Stress Disorder

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Abstract

Traumatic life events and their impact on individual functioning have received increased attention from health care professionals. While there exists a considerable literature examining diagnosis and treatment, no framework has been developed addressing recreational therapy interventions with this population. The purpose of this paper is to review and summarize selected literature on post-traumatic stress disorder, focusing upon the experience of Vietnam veterans; to suggest a literature-based model of recreational therapy interventions with traumatized individuals; and to operationalize the model through the description of recreational therapy interventions with Vietnam veterans currently in practice at the National Center for Post-Traumatic Stress Disorder (NCPTSD) at the Department of Veterans' Affairs Medical Center in Palo Alto, California. While the clinical examples used in this paper focus upon the experience of combat veterans who served in the Vietnam War, the conceptual and programmatic models presented will be useful for therapists working with traumatized individuals in many contexts, and will be adaptable to a wide variety of treatment settings.

Key Words

Post-Traumatic Stress Disorder
Recreation Therapy
Programming

CEU information begins on page 73.

Introduction

Traumatic life events and their profound impact upon individual functioning have increasingly captured the attention and concern of medical, allied health, and mental health professionals over the past 20 years. In the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM III-R), the proposed definition of traumatic life events was broad and non-specific: "...a psychologically disturbing event that is outside the range of usual human experience...(which) would be markedly distressing to almost anyone, and is usually experienced with intense fear, terror, and helplessness" (DSM III-R, 1987, p. 247). In contrast, the recently-published Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM IV), proposed a definition with markedly greater detail and specificity: "...actual or threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate" (DSM IV, 1994, p. 424). This definitional refinement is testimony to the prevalence of traumatic experiences in our culture, as well as to increased expertise among health care professionals regarding treatment and intervention.

The experience of trauma is inclusive, touching individuals in many life circumstances and contexts through all developmental stages. For example, estimates of traumatic events in the United States include: one in three females and one in five males is sexually assaulted before the age of 18; 1.4 million children per year are physically abused; 1.8 million women per year are physically abused; and six million persons per year are victims of violent criminal activity (McCann, Sakheim, & Abrahamson, 1988). Traumatic events may also include natural disaster, combat or war experi-

ence, physical illness or injury, caregiver trauma, or sudden loss of significant others (Janoff-Bulman, 1992; McCann et al., 1988; McCann & Pearlman, 1990).

Because of the prevalence of trauma in the human experience, it is inevitable that, as allied health professionals, recreational therapists will be confronted with patients, clients, or program participants manifesting symptoms of post-traumatic stress disorder. Therapists need to be sensitized to these issues and well-versed in current best practice regarding trauma in order to effectively and holistically treat the individual.

While expertise in the assessment and treatment of trauma has increased dramatically in the past two decades, the recreational therapy literature contains no systematic discussion or research related to trauma which can enhance the profession's ability to function effectively in the process of treatment. The purpose of this paper, therefore, is to review and summarize selected literature on post-traumatic stress disorder, focusing upon the experience of Vietnam veterans; to suggest a literature-based conceptual model of recreational therapy interventions with traumatized individuals; and to operationalize the model through a description of recreational therapy interventions currently being implemented with Vietnam veterans at the National Center for Post-Traumatic Stress Disorder (NCPTSD) at the Department of Veterans' Affairs Medical Center in Palo Alto, California. While the clinical examples used in this paper focus upon the experience of combat veterans who served in the Vietnam War, the conceptual and programmatic models defined will be useful for therapists working with traumatized individuals in many contexts, and will be adaptable to a wide variety of specific scenarios and treatment settings.

The National Vietnam Veterans Readjustment Study (Kulka, Fairbank, Hough, Jordan, Marmar, & Weiss, 1990) stated that over three million males and 7,000 females served in the Vietnam war. Of these, it is estimated that 960,000 males (31%) and 1,900 females (27%) have experienced symptoms of post-traumatic stress disorder at some point in their post-war lives. Their experiences were extreme, and in many ways unique to the combat setting itself. Nonetheless, their process of coping and adaptation, and their experiences with treatment, can illuminate core diagnostic and treatment issues relevant to many persons who have experienced traumatic events.

Trauma and Post Traumatic Stress Disorde

The Experience of Trauma

The DSM-IV (1994) defines a traumatic event as an ". tual or threatened death or serious injury, or otl threat to one's physical integrity" involving "inte fear, helplessness, or horror" (DSM IV, 1994, p. 4 Such an event may be lived or witnessed directly, experienced indirectly through a loved one or sign cant other. The DSM IV goes on to list examples traumatic life events, including "military combat, v lent personal assault,...natural or manmade disaste severe automobile accidents, or being diagnosed wit life-threatening illness," and in the case of childr "developmentally inappropriate sexual experien without threatened or actual violence or injury" (D IV, 1994, p. 424).

Researchers studying traumatic events of an treme and long-lasting nature have suggested some ditional defining characteristics. Kahana, Kaha Harel, and Rosner (1988), looking specifically at Hc caust and combat-related trauma, have identified following as core elements of the "extreme" traum experience:

1. Abrupt and extreme disruption in life context including isolation from home, loved ones, and familiar roles;
2. Diminished opportunities for coping or escape;
3. Randomness or unpredictability regarding the course of events; and
4. The imperative to inflict physical and/or psy chological suffering, frequently without clea meaning or moral justification.

Each of the above discussions of trauma inclu criteria regarding the event itself, as well as criteria garding the individual's affective and coping respor This conceptualization of trauma as both event and sponse-to-the-event is consistent with numerous th rists who address trauma from a cognitive apprais mastery perspective (e.g. Horowitz, 1986; Lazarus Folkman, 1984; Pearlin & Schooler, 1978; Stone, Helc & Schneider, 1988), as well as with those who addr the psychodynamics of attachment, separation, a loss (e.g. Laufer, Frey-Wouters, & Gallops, 1985; Lift 1988; Norman, 1988 McCann et al., 1988). Theorists proaching the study of trauma from developme and/or existential perspectives emphasize that event is defined as traumatic insofar as it threatens

negates core beliefs regarding one's competency, one's place in a logical and predictable world, one's sense of self-knowledge and identity, and one's ability to trust (Janoff-Bulman, 1985, 1992; Laufer, 1988; McCann et al., 1988; Parson, 1988).

In addition to the traumatic event itself, a crucial factor which is believed to shape long-term adjustment is the "recovery environment," or the social and emotional environment to which the traumatized individual returns (Green, Wilson, & Lindy, 1985; Wilson, 1989). Elements of the positive recovery environment include 1) acknowledgement or validation of the traumatic experience; 2) social and emotional support; and 3) structured opportunities for reintegration into valued social roles and activities. The hostile nature of the recovery environment to which Vietnam veterans returned has frequently been noted (Green et al., 1985; Laufer, 1988; Lifton, 1988; Wilson, 1989). In studying female veterans, most of whom served as nurses in Vietnam, numerous researchers have commented upon the "invisibility," or lack of recognition until very recently, of their experience (Furey, 1991; McVicker, 1985; Norman, 1988; Paul, 1985; VanDevanter, 1985).

In the case of the Vietnam war, premorbid and developmental factors have also been explored in terms of their mediating effect upon the trauma's overall impact. Developmental challenges confronting youth in Vietnam have been noted, specifically around issues of identity, relationship to authority, and individuation. These challenges, intrinsic to the lifestage of adolescence, may have been particularly salient and difficult for youth who served in Vietnam, as the average age of the Vietnam combat veteran was nineteen years old, seven years younger than the average age of the WWII combat veteran (Elder & Clipp, 1988; Wilson, 1989).

Coping and Adaptation Processes Related to Trauma

It is instructive to conceptualize trauma and post-traumatic stress disorder in the context of a spectrum of adaptive responses to life events. Within this context, a "stressor" may be defined as an internal or external event placing demands upon the individual which exceed his/her habitual coping or adaptation strategies (Horowitz, 1986). Central to this definition is the notion of "appraisal," or the internal evaluation of potential threat in relationship to existing coping abilities (Lazarus & Folkman, 1984). Janoff-Bulman (1992) has expanded upon this notion, suggesting that traumatic experiences are appraised by the individual as profoundly threatening to personal survival; "Extreme negative events that induce trauma are unique in that they force victims to come face to face with their vulnerability, with their essential fragility...They tell us that survival can no longer simply be assumed or ignored, and this threat to our biological integrity serves to undermine our psychological integrity as well" (Janoff-Bulman, 1992, p. 59).

Stressors, traumatic or otherwise, set in motion a process of transition, defined by Schlossberg (1984) as any change in basic assumptions, life patterns, roles, or relationships occurring in response to the stressor. Individuals utilize a variety of coping processes to meet the external and internal demands of the stressor and to assist them through the transition. Models of coping vary across the literature, but share a common focus upon active strategies aimed at 1) mastery of the stressor so that it is no longer overwhelming; 2) emotional catharsis with supportive others; and/or 3) cognitive redefinition or reappraisal of the stressor and its level of threat (Brammer & Abrego, 1981; Horowitz, 1986; Lazarus & Folkman, 1984; Pearlin & Schooler, 1978; Schlossberg, 1981; Stone, Helder, & Schneider, 1988). Horowitz (1986) differentiated coping strategies focused upon mastery ("intrusive") from those focused upon escape ("avoidant"). This dichotomy will be especially relevant to the discussion of post-traumatic stress disorder.

Kahana et al. (1988) reviewed ten studies of adaptive responses to traumatic events including war, incarceration in concentration camps, and natural disasters. They identified a set of characteristic coping mechanisms in response to extreme trauma. In summary form, these include:

1. Cognitive or Affective Escape: Dissociation; fantasy; regression; denial; numbing of affect; withdrawal;
2. Active Mastery: Seeking revenge; preparing for assault; seeking experiences of free will, choice, competence, and personal effectiveness, no matter how small or brief;
3. Creating Community: Seeking companionship, support, shared purpose; affective catharsis; altruism; and
4. Seeking Meaning: Redefining the trauma in the context of a larger plan; clinging to a will to live or a higher purpose.

The authors emphasize that any of these strategies may be adaptive and serve survival within the context of the

immediate trauma. In the long term, however, there is consensus in both trauma and coping literature that those coping strategies focused **primarily** upon active mastery will facilitate successful transition, while those focused **primarily** upon avoidance or denial will perpetuate traumatic experiences of fear, helplessness, and alienation (Brammer & Abrego, 1981; Csikszentmihalyi, 1990; Horowitz, 1986; Kobasa, 1979; Janoff-Bulman, 1985, 1992; Kahana et al., 1979; Lifton, 1988; Scurfield, 1985).

Post-Traumatic Stress Disorder

The above discussion identified a range of coping strategies, each adaptive in supporting the individual to survive extreme personal threat and vulnerability. Horowitz (1986) observed that, in the adaptive or successful coping process, these responses often occur in a naturally cyclical fashion, alternating between "intrusion" and "avoidance" responses. In this way, the individual is able to successfully master the stressor, and to experience periods of physical and emotional restoration in the process. Within this context, post-traumatic stress disorder may be conceptualized as the individual's attempt, albeit ineffective, to cope with and to master extreme trauma.

The DSM IV (1994) identifies three clusters of symptoms which must be both present and persistent (lasting over one month), and which must "cause clinically significant distress or impairment in social, occupational, or other important areas of functioning" (DSM IV, 1994, p. 424). These symptom clusters will be defined according to the DSM IV, discussed in terms of their adaptive function at the time of the trauma (in this case, combat trauma), and elaborated upon in terms of their behavioral manifestations and long-term impact upon functioning.

Persistent re-experiencing. Intrusive thoughts and memories, nightmares, and/or actual dissociation and re-experiencing (flashbacks) continue to occur after the traumatic event itself, and are accompanied by both affective and physiological distress. The individual may be especially sensitive to "triggering events that resemble or symbolize an aspect of the traumatic event" (DSM IV, 1994, p. 424), often resulting in an exacerbation of symptoms upon the anniversary of a significant traumatic event. Behaviorally, these symptoms may manifest as intense anxiety, rage, and destructive acts directed toward the self or others, often with sudden onset.

It has been determined across many types of traumatic experiences that the intensity and/or proxim of exposure to the trauma is positively correlated w high levels of intrusive symptoms (Janoff-Bulm 1992). Specifically, researchers found that direct ex sure to combat had a significant positive relations with intrusive symptom levels for both males and male veterans (Laufer et al., 1985; Norman, 1988).

Avoidance, detachment, numbing of affect. Per tent avoidance of thoughts, feelings, activities, pla or persons reminiscent of the trauma is a defining ch acteristic of post-traumatic stress disorder. In its treme state, avoidance may take the form of amnesi dissociation; in less extreme forms, it manifests as tachment from significant relationships and activit Over time, avoidance may extend beyond negative painful feelings to include positive, pleasurable, or ing feelings as well. Avoidant symptoms may mani behaviorally as affective "flatness," depression, w drawal, and/or inability to follow through with co mitments.

Various theorists identify the adaptive functio avoidance as one of protection from the reality of th or vulnerability, as well as from the devastating ings of grief resulting from the loss of significant sons. In fact, Laufer et al. (1985) and Norman (1 found high avoidance symptomatology to be sig cantly related to the loss of close buddies in Vietn Lifton (1988) observed clinically that avoidance sy toms result in profound impairments in the abilit invest in or to sustain intimate or close interpers relationships.

In addition to withdrawal from significant sons and activities, avoidant symptoms may man in expressed feelings of detachment or alienation one's pre-traumatic self, and in "a sense of a foresi ened future" (DSM IV, 1994, p. 428), or the absenc expectation of experiencing a normal life span, riage, career, children, or other developmental r stones. Laufer (1988) labelled this phenomenon the rial self," observing clinically that severely traumat individuals experience themselves as disconne from both past and future, thus thwarting their al to learn or to grow.

Increased arousal. Persistent physiolo arousal and heightened sensitivity to physical an fective stimuli may continue long after the traun experience has passed. This state may manifes sleeplessness or sleep disturbance, heightened signs, hypervigilance and heightened startle respo Behaviorally, heightened arousal may manifest as

ety, impulsive anger, distractibility, and difficulty concentrating.

Not surprisingly, high and persistent arousal levels were found to be significantly related to the intensity of combat exposure in Vietnam veterans (Laufer et al., 1985; Norman, 1988). As Kahana et al. (1988) noted in their discussion of the Holocaust and combat experiences, vigilance and a heightened readiness to respond are adaptive responses in a situation of imminent threat. However, as discussed by Wilson (1989) and Bowen and Lambert (1986), increased arousal may become conditioned or habitual behavior, and as such, increasingly difficult to interrupt. As a result, the individual may remain essentially locked into the re-experiencing of the traumatic stress response.

The three symptom clusters of intrusion, avoidance, and arousal thus evolve into a system of coping which is maladaptive. As discussed above, these responses and behaviors occur naturally in a cyclical manner, and often result in successful resolution. However, as discussed by both Horowitz (1986) and Wilson (1989), the individual with post-traumatic stress disorder is unable to internally move beyond the immediate experience of trauma. External events, reminiscent of some aspect of the trauma, result in the intrusion of memories, affect, and hyperarousal responses. Then, to guard against the negativity and intensity of the intrusive symptoms, the individual detaches through avoidance. The cycle continues with little change or resolution, and, without intervention, remains unchanged.

The Impact of Post-Traumatic Stress Disorder Upon Functioning

The cluster of symptoms defining post-traumatic stress disorder has been demonstrated to impair individual functioning in many domains of physical and mental health. For example, traumatic experiences have been found to be related to ongoing physical health problems among Vietnam veterans. Kulka et al. (1990) found a significant positive relationship between high war zone stress and physical health concerns; veterans who experienced high war zone stress demonstrated a more negative perception of their physical health, a greater number of reported health concerns, and a higher usage of health care facilities. Further, Wolfe & Brown (1991) found a significant positive correlation between intensity of arousal symptoms and prevalence of stress-induced illnesses among female veterans.

Familial and intimate relationships are profoundly affected by post-traumatic stress disorder. Kulka et al. (1990) found that, of those veterans diagnosed with post-traumatic stress disorder, 80% scored in the lowest possible range on a scale measuring post-war readjustment relative to marital, family, and significant relationships. Further, of those veterans who had been married, 70% of males with post-traumatic stress disorder had been divorced at least once, compared to 35% of those males without the disorder. Similarly, 79% of females with post-traumatic stress disorder had been divorced at least once, compared to 27% without the disorder. In terms of ratings on measures of parenting effectiveness and overall family adjustment, 55% of veterans with post-traumatic disorder who had children scored in the "extremely poor" range of functioning, compared to 19% without the disorder.

In the domain of work and professional functioning, Kulka et al. (1990) found that 42% of male veterans with post-traumatic stress disorder and 22% of female veterans with the disorder scored in the highest possible range on an "occupational instability" scale, which measured such indicators as number of job changes in a given year, and number and length of periods of unemployment.

Finally, it is critical to note that substance abuse is often a co-existing disorder in persons with post-traumatic stress disorder. Kulka et al. (1990) estimated that, of veterans diagnosed with post-traumatic stress disorder, 49% met the criteria for co-morbid diagnoses of alcohol or drug addiction. Other researchers have suggested that the incidence is much higher (Foy, 1992). There appears to be agreement that substance abuse functions as both symptom and coping mechanism, serving to perpetuate processes of avoidance and numbing, thereby reducing the immediate distress of intrusion and arousal symptoms, but interrupting long-term or successful resolution of the trauma (Blake et al., 1993; Foy, 1992).

Treatment of Post-Traumatic Stress Disorder

Treatment strategies addressing post-traumatic stress disorder focus upon the physiological, cognitive, and affective processes which perpetuate the traumatic experience. Treatment interventions encourage successful resolution of the traumatic event, foster new and more adaptive coping skills, and promote re-engagement in personally meaningful life pursuits. Drawing from multiple perspectives on treatment (Brammer & Abrego, 1981; Blake et al., 1993; Bowen & Lambert, 1986; Elder & Clipp, 1988; Foy, 1992; Horowitz, 1986;

Janoff-Bulman, 1992; Laufer, 1988; Lifton, 1988; McCann et al., 1988; Parson, 1988; Schlossberg, 1984; Scurfield, 1985), including psychodynamic, cognitive-behavioral, and existential, the following summary of post-traumatic stress disorder treatment is presented. Stages are described in roughly sequential fashion, reflecting consensus regarding the general progression of the intervention process.

Self-disclosure and acknowledgement. Disclosure of experiences and feelings in a supportive and accepting environment is considered to be critical in fostering a readiness for change. Such disclosure begins to address and resolve primary symptoms of avoidance and isolation, and facilitates rebuilding of trust and nondefensive self examination.

Cognitive and behavioral restructuring. Techniques for exploring and managing physiological arousal, anger, and anxiety are developed, practiced, and reinforced throughout the course of treatment. Self-destructive coping behaviors including self-harm, violent anger, and substance abuse are addressed and alternatives developed.

Re-experiencing. Guided confrontation of intrusive memories are often considered critical to the process of diminishing intrusive symptoms and redefining the self. In this process, maladaptive beliefs regarding guilt and personal responsibility for events beyond one's control may be addressed, and unfinished grief or anger may be expressed and completed.

Renewal of meaning and building of supports. Support and guidance in the establishment of renewed investments in self, others, community, and personally meaningful life pursuits constitutes a final phase of treatment. Newly-formed perspectives on the traumatic experience, as well as on personal identity, interpersonal relationships, and coping strategies are developed, practiced, and reinforced.

Recreational Therapy and Post Traumatic Stress Disorder

The Impact of Recreation and Leisure on Coping, Transition, and Stress Symptoms

In considering a conceptual framework for recreational therapy interventions addressing post-traumatic stress disorder, it is useful to review theory and research regarding the role of recreation and leisure in the coping process. Leisure as a "stress buffer" has been discussed by several researchers. For example, Wheeler & Frank (1988) found leisure activity participation to be one of four (out of a total of 22) statistically significant stress buffers (defined as activities or beliefs which assist in the coping process). Reich & Zautra (1988) found that positive events, while not found to necessarily increase subjective well-being, did serve as a buffer by reducing the negative impact of negative life events on subjective well-being.

Leisure as supportive of the process of transition has been explored both theoretically and empirically. Identity formation and social role definition are developmental tasks believed to be facilitated and enhanced through involvement in recreation and leisure (Iso-Ahola, 1980; Kelly, 1983; Kleiber & Kelly, 1980). This relationship has been explored by several researchers, focusing particularly upon age-related transitions. Gordon, Gaitz, and Scott (1976) and Kelly, Steinkamp, and Kelly (1986) found that active leisure involvement assisted the individual in transitions related to aging by providing continuity and connection with past roles and sources of fulfillment, and by providing opportunities to experience new or emerging aspects of personal identity. As stated by Kelly, "In critical role transitions leisure may not only provide continuity in personal and social identities, but may open doors to new relationships and investments" (Kelly, 1983, p. 116).

The subjective experience of leisure has been characterized by feelings of competence, mastery, and control (Csikszentmihalyi, 1990; Iso-Ahola, 1980, 1984); by involvement, engagement, focus, and internally-based motivation (Csikszentmihalyi, 1990; Gunter, 1987; Neulinger, 1974); by "optimal" levels of arousal and relaxation (Csikszentmihalyi, 1990; Gunter, 1987); by freedom and absence of constraint (Gunter, 1987; Iso-Ahola, 1980, 1984; Neulinger, 1974; Samdahl, 1988); and by self-expression (Gordon, Gaitz, & Scott, 1976; Samdahl, 1988). The intrusion, avoidance, and over-arousal symptoms which characterize post-traumatic stress disorder seem incompatible with the experiences of engagement, focus, relaxation, freedom, and mastery which are described above. Conceptually, then, it is possible that facilitation of high-quality recreation and/or leisure experiences (specifically, experiences which facilitate interaction, which regulate stress and arousal, and which are subjectively pleasurable and/or meaningful) might serve to actually reduce symptom levels in persons with post-traumatic stress disorder, thereby playing a crucial role in the treatment process.

In fact, research regarding the efficacy of leisure-related interventions with persons with related psychi-

atric disorders bears out this potential link. *The Benefits of Therapeutic Recreation: A Consensus View* (Coyle, Kinney, Riley, & Shank, 1991) cited numerous studies attesting to the positive health outcomes resulting from participation in both recreational activity and structured therapeutic interventions practiced by recreational therapists and related health professions. The studies cited by Coyle et al. (1991) indicated that participation in structured physical recreation has been demonstrated to significantly reduce depressive symptoms (Martinsen, Medhus, & Sandvik, 1984) and to increase active engagement (Wassman & Iso-Ahola, 1985) in adults hospitalized for depression. A study by de Vries (as cited in Coyle et al., 1991) found that physical activity can reduce symptoms of anxiety, and has equal or greater effectiveness than medication (de Vries, 1987). A study by Rancourt (as cited in Coyle et al., 1991) reported that specific leisure education interventions can improve stress management and coping skills, interpersonal skills, and decision-making skills in adult women with addictions (Rancourt, 1991).

A Framework for Recreational Therapy Interventions with Traumatized Persons

Based upon the above discussions of post-traumatic stress disorder, and upon theory and research regarding leisure-related interventions with related disorders, a conceptual framework for recreational therapy interventions is proposed. The interventions are presented in a sequence which closely mirrors the overall course of treatment, thereby exploring the potentially valuable role of recreational therapy in all phases of treatment. Recreational therapy interventions are organized in terms of their intended impact upon four domains of functioning: Coping Skills; Affect and Engagement; Quality of Relationships; and Identity and Sense of Purpose. The literature suggests that improvement in functioning in these four areas should lead to a reduction in intrusion and arousal symptoms.

It will be noted that some of the interventions and treatment objectives defined relate to overall functioning, and others are specific to recreation and leisure contexts and skills. This duality of focus is purposeful, based upon the implications in the literature that recreation and leisure activities may, in themselves, serve to reduce traumatic stress symptoms. Therefore, the proposed model of interventions is designed to address both overall symptom reduction, and ability to successfully engage and function within specific recreation and leisure contexts.

Facilitating improved coping. Horowitz (1986) suggested strategies for working with and minimizing intrusion and hyperarousal symptoms. These strategies included exposure to subjectively enjoyable and relaxing experiences, and education in identifying "trigger" situations and monitoring and reducing physiological and affective stress responses. The purposes of recreational therapy interventions which address intrusive symptoms are to decrease the presence and intensity of those symptoms and to facilitate the development of improved coping responses. Recreational therapy intervention strategies may include:

1. Treatment interventions designed to promote relaxation and reduce physiological and affective arousal; and
2. Educational interventions designed to teach behavioral and cognitive strategies for
   a. identifying triggers of traumatic stress responses;
   b. reducing traumatic stress responses including arousal, anxiety, fear, and/or anger; and
   c. practicing effective coping strategies in progressively challenging environments.

As substance abuse has been discussed above as a coping mechanism related to intrusion and arousal, it is critical that appropriate interventions regarding recovery and relapse prevention be addressed.

Sample treatment goals addressing intrusive symptoms might include the following:

1. To differentiate responses to stressors which are adaptive from those which are maladaptive;
2. To identify external and internal triggers of traumatic stress responses;
3. To identify and demonstrate coping strategies which effectively interrupt or prevent traumatic stress responses;
4. To identify the role of recreation and leisure in managing stressors, arousal, and anxiety;
5. To identify the role of recreation and leisure in prevention of substance abuse relapse;
6. To demonstrate reduced traumatic stress responses in recreation and leisure settings;
7. To demonstrate the ability to independently choose, plan, and engage in recreation and leisure activities which effectively reduce the impact of traumatic stress symptoms and other life stressors.

Facilitating affect and engagement. Horowitz (1986) suggested strategies for intervening in avoidance symptoms, including encouragement of self-disclosure and expression; creation of supportive social networks; and re-engagement in personally meaningful activity. The purposes of recreational therapy interventions addressing affect and engagement are to facilitate increased capacity for, and involvement in, subjectively enjoyable activities, with the aim of improving mood and perceived well-being. Recreational therapy intervention strategies might include:

1. Treatment interventions designed to promote enjoyment and positive affect; and
2. Educational interventions designed to
   a. explore personal needs and internal constraints regarding engagement and positive affect; and
   b. facilitate acquisition of skills in planning, choosing, and engaging in affectively positive activities.

As above, the role of substance abuse in promoting withdrawal, avoidance, and negative affect must be addressed, and affective challenges related to sobriety mastered.

Sample treatment goals addressing this domain of functioning include:

1. To recall and describe personal experiences of active engagement and positive affect;
2. To identify internal constraints to engagement in activities promoting positive affect and subjective well-being;
3. To actively choose, plan, and engage in recreation and leisure activities which result in reported improvement in affect;
4. To identify resources and social networks facilitating participation in pleasurable recreation and leisure pursuits.

Facilitating improved quality of relationships. The impoverished quality of interpersonal relationships has been discussed as a lasting and often painful consequence of trauma. For persons with post-traumatic stress disorder, close and intimate relationships may evoke memories of loss, and/or affective responses of guilt, betrayal, mistrust, or threat. The purposes of recreational therapy interventions addressing the quality of interpersonal relationships are to foster increased capacity for initiating and sustaining close and satisfying relationships, and to facilitate improved skills in communication and interaction. Recreational therapy interventions might include:

1. Treatment interventions designed to promote structured interaction and self-disclosure; and
2. Educational interventions designed to
   a. explore personal needs and internal constraints related to sustaining satisfying relationships;
   b. facilitate acquisition of skills and knowledge of resources for initiating and sustaining relationships (including communication and conversational skills, assertiveness and conflict resolution, and, as appropriate, family issues); and
   c. provide opportunities for planning and engaging in social recreation activities, and processing emerging relationship skills.

As appropriate, the development of new relationships consistent with a sober lifestyle should be explored.

Sample recreational therapy treatment goals addressing this domain of functioning might include:

1. To identify the importance of satisfying interpersonal relationships in maintaining health and well-being;
2. To identify constraints to initiating and maintaining significant interpersonal relationships;
3. To demonstrate improved skills in self disclosure, listening, and conversation;
4. To demonstrate improved skills in resolution of conflict and management of anger;
5. To demonstrate improved cooperative planning skills and interaction in recreation and leisure contexts;
6. To report increased satisfaction with quantity and quality of interpersonal relationships.

Strengthening personal identity and sense of positive future. Interruptions in sense of identity and positive future orientation have been discussed as pervasive and ongoing manifestations of post-traumatic stress disorder. The purposes of recreational therapy interventions addressing identity and future orientation are to facilitate improved expression of personal uniqueness, to promote increased continuity or connection between pre-traumatic and post-traumatic identities, and to foster increased optimism regarding both present and future life experiences. Recreational thera-

py intervention strategies might include:

1. Educational interventions designed to
   a. promote recall of pre-traumatic identity, and identify core values therein; and
   b. foster re-engagement in previously meaningful activities; and
2. Participatory interventions providing opportunities for active community involvement and expression of personal values.

Sample recreational therapy treatment goals might include:

1. To identify and verbalize personal qualities and values both pre- and post-trauma;
2. To identify, plan, and engage in recreation and leisure activities consistent with past and present values;
3. To report increased satisfaction with daily activities and expressions of identity; and
4. To identify and describe anticipated future life experiences characterized by positive affect and high satisfaction.

Program Design and Facilitation. Design of specific programs and interventions must be undertaken with sensitivity to the particular population and setting being addressed. Program content and facilitation techniques must be congruent with the interdisciplinary team's overall treatment strategy. Nonetheless, the traumatic stress literature suggests certain guiding principles which would seem to be relevant to program design and facilitation regardless of population or setting.

The literature suggests that, in order to effectively use recreational therapy modalities to address traumatic stress symptoms, any intervention would need to incorporate components which 1) promote and teach the management of stressors and arousal; 2) promote and teach interaction; and 3) promote and facilitate enjoyment and positive affect. Therapists designing specific programs, therefore, might pay particular attention to such issues as 1) the level of frustration, stress, and/or anxiety contained within the proposed program; 2) flexibility and adaptability of program design as needed; 3) opportunities for structured and guided interaction; 4) congruence with patient preferences and level of skill; and 5) preparation and debriefing as crucial elements of the program.

From Theory to Practice: Recreational Therapy at the National Center for Post-Traumatic Stress Disorder

The National Center for Post-Traumatic Stress Disorder, Clinical Laboratory and Education Division, is housed at the Department of Veterans Affairs Medical Center, Menlo Park Division, in Palo Alto, CA. The National Center is a 105-bed inpatient program, with two units comprising 93 beds for male veterans (one unit serving persons presenting with co-morbid PTSD and primary alcohol or substance abuse, and one unit serving those with a primary diagnosis of PTSD only), and a 12-bed unit for female veterans (the Women's Trauma Recovery Program). The majority of veterans receiving treatment at the Center served in the Vietnam War. Veterans receive comprehensive treatment from a multi-disciplinary team consisting of psychiatrists, psychologists, social workers, nurses, readjustment counselors, occupational therapists and recreational therapists. Treatment is voluntary, and length of stay is approximately 90 days.

The program addresses the maladaptive coping mechanisms associated with post-traumatic stress disorder in a therapeutic milieu setting. Psychoeducational, psychodynamic and cognitive-behavioral treatment approaches are practiced in 40 groups and related activities per week. Therapy groups include PTSD Education, Family Education, Anger Management, Stress Management, Health Issues, Leisure Education, Relapse Prevention, Assertiveness Training, Trauma Resolution, and others, in addition to daily process-oriented groups (Gusman, 1993). With few exceptions, groups are facilitated by various members of the interdisciplinary team, with shifting or rotating of assignments occurring as needed. In addition, each patient is assigned an individual staff member who serves as a case manager, monitoring the overall course of treatment. Thus, recreational therapists are involved in virtually all aspects of treatment.

The recreational therapists on the unit work closely with other members of the treatment team to address primary symptoms and to reinforce newly-developing adaptive coping strategies. Rehabilitative, educational, and elective recreational opportunities are provided, based upon assessed need and progress throughout the program. The following summarizes the recreational therapy treatment process at the National Center.

Assessment

Patients are assessed during their first two weeks in treatment on the unit. Currently, the Leisure Barriers Inventory (LBI) (Peterson and Dunn, 1986) is administered, and accompanied by an open-ended questionnaire and interview with a therapist. Population norms for LBI performance scores have not been developed for this group; however, responses to open-ended questions provide insight regarding recreational therapy treatment issues. For example, in a group of 54 assessment questionnaires collected during a six-month period, 41 veterans listed pre-admission leisure activities which were solitary, or which appeared clinically to serve the process of numbing or avoidance. As one veteran stated, "For the past 24 years I have not had any drive or desire for leisure...my leisure was basically picking up a couple of six-packs and locking myself in my apartment, turning off the lights and trying to put the world out of my mind. When I couldn't fall asleep I would walk late at night when the rest of the world wasn't aware of my existence, and then come home and lay on the couch...it was the only way to get away from the stress of every day, from rejection and disappointments." Only nine veterans listed any pre-admission leisure activity which included other people.

Similarly, when asked to list constraints to leisure, few veterans listed such barriers as time, transportation, money, or physical limitations. Thirty-six veterans, however, cited alcohol and/or avoidance of other people as primary constraints, and 41 veterans identified fear and suspicion, "negative thinking," or incapacity for enjoyment as primary constraints. As expressed by another veteran, "The barriers that are preventing me from having any kind of leisure are the way society, family, and my work environment have responded to me in such negative ways that I am not able to relax or trust anyone or anything in my present state of being."

Upon assessment, patients receive an individualized treatment plan for recreational therapy, which is both discipline-specific and consistent with overall treatment goals. At the current time, an improved assessment tool is being field-tested, with the aim of more accurately identifying high-priority recreational therapy treatment needs (Mason, 1993).

Interventions

Recreational therapy interventions continue for the duration of the patient's stay at the National Center. The scope of programs is designed to provide a range of treatment and educational interventions, as well as opportunities for guided practice and mastery of skills. Based upon assessed need and functional level, interventions may include:

Leisure education. This weekly group serves as an introduction to core principles related to recreation and the rehabilitation process, and as a forum for ongoing processing of concerns related to recreation activity participation throughout the course of treatment. Program goals include: defining recreation and leisure and their relationship to mental and physical health; identifying personal abilities, preferences, needs, and constraints related to recreation and leisure; developing coping, stress management, and problem solving skills; increasing knowledge of and access to recreation resources; enhancing planning skills; and improving social skills. Both classroom and community-based modalities are utilized in this group, facilitating didactic instruction, practice, and processing.

Recreation activity groups and "Community Club." Supervised and, as appropriate, self-directed activity groups utilizing the Medical Center's recreational facilities occur several times weekly. Program goals include improved physical and mental health through management of stress and arousal symptoms; improved interaction in cooperative and competitive contexts; and leadership development.

Special events. Events centered around particular themes or holidays provide opportunities for the entire community to share in the planning, implementing, and evaluating of community-wide activities, thereby addressing goals of improved interaction and engagement. Patients are encouraged to take leadership roles, as appropriate, in the planning and design of the events.

Structured outings, weekend planning, and weekend passes. Supervised outings and independent weekend passes provide opportunities for practicing newly-acquired skills in the more challenging environment of the natural community. As needed, patients receive staff and peer support in resource identification, planning, and debriefing.

Discharge Planning

As the final weeks of treatment approach, patients work individually with staff to develop a post-discharge leisure plan, in order to provide structure for continuing rehabilitative efforts. The plan includes: community resources, goals, objectives, potential obstacles, and coping strategies. During this planning

process, the patient completes an open-ended self-evaluation regarding perceived progress and benefits gained from recreational therapy interventions.

Evaluation of Treatment Outcomes

While progress toward individual treatment objectives is tracked in patients' charts, group outcome data regarding both inpatient treatment and longer-term effectiveness (post-discharge follow-up) are just beginning to be compiled. It was clinically observed in one group of 32 evaluation questionnaires, however, that, at the end of treatment, veterans were able to identify benefits of recreational therapy interventions. Among the most frequently-mentioned benefits were companionship and improved interpersonal skills ("a feeling of belonging"..."usefulness"..."group unity"); increased ability to experience enjoyment ("enjoyment of the moment"..."being free from having to be active all the time"); and improved management of arousal and anxiety ("a feeling of restfulness"..."being able to slow down").

Conclusions

Clearly, critical questions remain to be researched regarding recreational therapy assessment, interventions, and outcomes in the treatment of persons with post-traumatic stress disorder. This paper has attempted to propose a research and theory-based framework in which to conceptualize and design effective recreational therapy interventions with this vulnerable population. The framework needs to be thoroughly evaluated as a viable foundation upon which to build effective interventions and programs. Some preliminary research tasks might include 1) determination of population norms regarding recreation and leisure functioning; 2) investigation of those recreational therapy interventions which most effectively address intrusion and avoidance symptoms; 3) followup studies addressing long-term impact of recreational therapy interventions; 4) determination of the impact of selected variables (sex, age, type of traumatic experience, pre-trauma functioning) upon the effectiveness of interventions.

It appears that recreational therapy has the potential to function as a powerful modality in the treatment of post-traumatic stress disorder. It is hoped that the material presented can be utilized as a foundation from which therapists can adapt interventions to a wide variety of traumatized populations. In this way, the discipline of recreational therapy will be able to more insightfully and comprehensively address the needs of individuals for whom traumatic life events have left a profound and often devastating mark.

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